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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/587,892	06/06/2000	Ramesh Nagarajan	12	8023

7590 01/12/2006

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EXAMINER

NGUYEN, TOAN D

ART UNIT PAPER NUMBER

2665

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/587,892

Applicant(s)

NAGARAJAN, RAMESH

Examiner

Toan D. Nguyen

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. In view of the Appeal Brief filed on October 21, 2005, PROSECUTION IS HEREBY REOPENED. A non-final office action is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Claim Objections

2. Claims 1, 6, 15, 18 and 19 are objected to because of the following informalities:

In claim 1 line 13, it is suggested to change "a given network" to --- the given network ---. Similar problem exists in claim 19 line 13.

In claim 6 line 1, it is suggested to change "a copy of the signal" to --- the copy of the signal ---. Similar problem exists in claim 15 line 1.

In claim 18 line 1, it is suggested to change "at least one of" to --- the at least one of ---.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russ et al. (US 5,781,535) in view of Al-Salameh et al. (US 5,742,774).

For claims 1 and 8-9, Russ et al. disclose implementation protocol for SHN-based algorithm restoration platform, the method comprising the steps of:

routing a given traffic demand from a first network element (figure 8, reference NODE 4, col. 9 lines 62-64) to a second network element (figure 8, reference NODE 2) (col. 10 lines 4-6); and

processing the traffic demand in the second network element (figure 8, reference NODE 2) such that a copy of a signal associated with the demand is at least one of: (i) retained at the second network element (reference NODE 2, col. 10 lines 29-30), while the signal is routed to at least one additional network element (col. 10 lines 4-5); and (ii) routed to at least one additional network element, while the signal is routed to at least one network element other than the additional network element (col. 10 lines 4-5).

However, Russ et al. do not expressly disclose:

wherein the second network element is coupled to a first dual-homed network element of a set of dual-homed network elements, either directly or via a given network

element corresponding to said at least one network element other than the additional network element; and

wherein a given network element corresponding to said at least one additional network elements is coupled to a second dual-homed network element of the set of dual-homed network elements, either directly or via another additional network element.

In an analogous art, Al-Salameh et al. disclose:

wherein the second network element (figure 1, reference 16₃) is coupled to a first dual-homed network element (figure 1, reference 20₂) of a set of dual-homed network elements (figure 1, reference 14), either directly or via a given network element corresponding to said at least one network element other than the additional network element (col. 4 lines 19-30, col. 5 lines 10-12 and col. 6 lines 20-23); and

wherein a given network element (figure 1, reference 16₄) corresponding to said at least one additional network elements is coupled to a second dual-homed network element (figure 1, reference 20_n) of the set of dual-homed network elements (figure 1, reference 14), either directly or via another additional network element (col. 4 lines 19-30, col. 5 lines 10-12 and col. 6 lines 20-23).

Al-Salameh et al. disclose further wherein the second network element is an element of a set of dual homed network elements (col. 4 lines 19-30, col. 5 lines 10-12 and col. 6 lines 20-23 as set forth in claim 8); wherein the at least one additional network element is an element of a set of dual-homed network elements (col. 4 lines 19-30, col. 5 lines 10-12 and col. 6 lines 20-23 as set forth in claim 9).

One skilled in the art would have recognized the second network element is coupled to a first dual-homed network element of a set of dual-homed network elements, and would have applied Al-Salameh et al.'s optical fiber transmission network in Russ et al.'s flooding message. Therefore, it would have been obvious to one of ordinary skilled in the art at the time of the invention, to use Al-Salameh et al.'s multi-ring SONET architecture having shared gateways daisy chained to complete the main and subsidiary ring controlled by a common master controller in Russ et al.'s implementation protocol for SHN-based algorithm restoration platform with the motivation being to pass a block of information traveling on one of the ring 12 and 14 to the other ring (col. 4 lines 15-17).

For claim 2, Russ et al. disclose wherein the first network element (figure 8, reference NODE 4) comprises a source network element of the traffic demand (col. 9 lines 62-64).

For claim 3, Russ et al disclose wherein the second network element (figure 8, reference NODE 2, comprises an element of a ring-type transport (col. 1 lines 54-55).

For claim 4, Russ et al disclose wherein the second network element (figure 8, reference NODE 2) comprises an element of a mesh-type transport (col. 1 line 60).

For claim 5, Russ et al. disclose wherein the copy of the signal associated with the demand is generated and retained at the second network element (reference NODE 2, col. 10 lines 29-30), and the signal continues on to another network element (col. 10 lines 4-5).

For claim 6, Russ et al. disclose wherein a copy of the signal is generated at each of a set of multiple network elements including the second network element (col. 10 lines 4-5 and col. 10 lines 29-30).

For claim 7, Russ et al. disclose wherein the copy of the signal associated with the demand (col. 10 lines 29-30) comprises at least a portion of a multicast of the signal generated by the second network element (reference NODE 2) and multicast to at least two other network elements (figure 8, col. 10 lines 8-12).

For claims 10, 17 and 18, Russ et al. disclose implementation protocol for SHN-based algorithm restoration platform, the apparatus comprising:

a given network element (figure 8, reference NODE 2) coupled to one or more additional network elements (figure 8, references NODE 1, 3, 4, 5 and 6) and operative to process a traffic demand received from one of the additional network elements (figure 8, reference NODE 4) such that a copy of a signal associated with the demand is at least one of: (i) retained at the given network element (col. 10 lines 29-30), while the signal is routed to at least one of the additional network elements (col. 10 lines 4-5); and (ii) routed to at least one of the additional network elements, while the signal is routed to at least one network element other than the one of the additional network elements (figure 8, col. 10 lines 4-5).

However, Russ et al. do not expressly disclose:

wherein the given network element is coupled to a first dual-homed network element of a set of dual-homed network elements, either directly or via a given network

element corresponding to said at least one network element other than the additional network element; and

wherein another network element corresponding to said at least one of the additional network elements is coupled to a second dual-homed network element of the set of dual-homed network elements, either directly or via another additional network element.

In an analogous art, Al-Salameh et al. disclose:

wherein the given network element (figure 1, reference 16₃) is coupled to a first dual-homed network element (figure 1, reference 20₂) of a set of dual-homed network elements (figure 1, reference 14), either directly or via a given network element corresponding to said at least one network element other than the additional network element (col. 4 lines 19-30, col. 5 lines 10-12 and col. 6 lines 20-23); and

wherein another network element (figure 1, reference 16₄) corresponding to said at least one of the additional network elements is coupled to a second dual-homed network element (figure 1, reference 20_n) of the set of dual-homed network elements (figure 1, reference 14), either directly or via another additional network element (col. 4 lines 19-30, col. 5 lines 10-12 and col. 6 lines 20-23).

Al-Salameh et al. disclose further wherein the given network element is an element of a set of dual-homed network elements (col. 4 lines 19-30, col. 5 lines 10-12 and col. 6 lines 20-23 as set forth in claim 17); and wherein at least one of the additional network elements is an element of a set of dual-homed network elements (col. 4 lines 19-30, col. 5 lines 10-12 and col. 6 lines 20-23 as set forth in claim 18).

One skilled in the art would have recognized the given network element is coupled to a first dual-homed network element of a set of dual-homed network elements, and would have applied Al-Salameh et al.'s optical fiber transmission network in Russ et al.'s flooding message. Therefore, it would have been obvious to one of ordinary skilled in the art at the time of the invention, to use Al-Salameh et al.'s multi-ring SONET architecture having shared gateways daisy chained to complete the main and subsidiary ring controlled by a common master controller in Russ et al.'s implementation protocol for SHN-based algorithm restoration platform with the motivation being to pass a block of information traveling on one of the ring 12 and 14 to the other ring (col. 4 lines 15-17).

For claim 11, Russ et al. disclose wherein the traffic demand is received at the given network element (reference NODE 2) from a source network element of the traffic demand (figure 8, reference NODE 4) (col. 9 lines 62-64).

For claim 12, Russ et al. disclose wherein the given network element comprises an element of a ring-type transport (col. 1 lines 54-55).

For claim 13, Russ et al. disclose further wherein the given network element comprises an element of a mesh-type transport (col. 1 line 60).

For claim 14, Russ et al. disclose wherein the copy of the signal associated with the demand is generated and retained at the given network element (reference NODE 2, col. 10 lines 29-30) and the signal continues on to another network element (col. 10 lines 4-5).

For claim 15, Russ et al. disclose wherein a copy of the signal is generated at each of a set of multiple network elements including the given network element (col. 10 lines 4-5 and col. 10 lines 29-30).

For claim 16, Russ et al. disclose wherein the copy of the signal associated with the demand (col. 10 lines 29-30) comprises at least a portion of a multicast of the signal generated by the given network element and multicast to at least two other network elements (figure 8, col. 10 lines 8-12).

For claim 19, Russ et al. disclose implementation protocol for SHN-based algorithm restoration platform, the apparatus comprising:

a first network element (figure 8, reference NODE 4, col. 9 line 62) ; and
a second network element (figure 8, reference NODE 2) coupled to the first network element (figure 8, reference NODE 4), the first network element (reference NODE 4) routing a given traffic demand to the second network element (reference NODE 2)(col. 9 lines 62-64 and col. 10 lines 4-5), the second network element (figure 8, reference NODE 2) processing the traffic demand such that a copy of a signal associated with the demand is at least one of (i) retained at the second network element (reference NODE 2, col. 10 lines 29-30), while the signal is routed to at least one additional network element (col. 10 lines 4-5); and (ii) routed to at least one additional network element, while the signal is routed to at least one network element other than the additional network element (col. 10 lines 4-5).

However, Russ et al. do not expressly disclose:

wherein the second network element is coupled to a first dual-homed network element of a set of dual-homed network elements, either directly or via a given network element corresponding to said at least one network element other than the additional network element; and

wherein a given network element corresponding to said at least one additional network elements is coupled to a second dual-homed network element of the set of dual-homed network elements, either directly or via another additional network element.

In an analogous art, Al-Salameh et al. disclose:

wherein the second network element (figure 1, reference 16₃) is coupled to a first dual-homed network element (figure 1, reference 20₂) of a set of dual-homed network elements (figure 1, reference 14), either directly or via a given network element corresponding to said at least one network element other than the additional network element (col. 4 lines 19-30, col. 5 lines 10-12 and col. 6 lines 20-23); and

wherein a given network element (figure 1, reference 16₄) corresponding to said at least one additional network elements is coupled to a second dual-homed network element (figure 1, reference 20_n) of the set of dual-homed network elements (figure 1, reference 14), either directly or via another additional network element (col. 4 lines 19-30, col. 5 lines 10-12 and col. 6 lines 20-23).

One skilled in the art would have recognized the second network element is coupled to a first dual-homed network element of a set of dual-homed network elements, and would have applied Al-Salameh et al.'s optical fiber transmission network in Russ et al.'s flooding message. Therefore, it would have been obvious to one of

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ordinary skilled in the art at the time of the invention, to use Al-Salameh et al.'s multi-ring SONET architecture having shared gateways daisy chained to complete the main and subsidiary ring controlled by a common master controller in Russ et al.'s implementation protocol for SHN-based algorithm restoration platform with the motivation being to pass a block of information traveling on one of the ring 12 and 14 to the other ring (col. 4 lines 15-17).

Response to Arguments

5. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D. Nguyen whose telephone number is 571-272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Huy D. Vu', with a long horizontal line extending to the right.

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600